

CLAIMS:

1. A receiver for receiving a plurality of different signals at the same time, said receiver comprising:

5 means for identifying at least one strongest signal of said plurality of different signals; and

a filter for attenuating said at least one strongest signal with respect to the other of said plurality of signals.

10 2. A receiver as claimed in claim 1, wherein the plurality of different signals are at different frequencies.

15 3. A receiver as claimed in claims 1 or 2, wherein said filter is a notch filter.

20 4. A receiver as claimed in any one of the preceding claims, wherein an analogue to digital converter is coupled to the output of the filter, whereby the at least one strongest signal is in the dynamic range of said analogue to digital converter after being attenuated by said filter.

25 5. A receiver as claimed in any one of the preceding claims, wherein a downconverter unit is provided for down converting said signals and the identifying means comprises means for measuring the strength of the signals at the baseband.

30 6. A receiver as claimed in any one of the preceding claims, wherein an analogue to digital converter is provided, the digital output of the analogue to digital converter being coupled to the input of said identifying means and the identifying means comprises means for measuring the strength of the digital signals from the analogue to digital converter.

35 7. A receiver as claimed in any one of the preceding claims, wherein there is provided an input for receiving said signals, a splitter for dividing said signals, said splitter comprising a first output coupled to said identifying means and a second

output coupled to a main signal path which includes said filter.

8. A receiver as claimed in claim 7, wherein the splitter is arranged so that the signals on the first output are much weaker than the signals on the second output.

9. A receiver as claimed in claim 7 or 8, wherein said splitter comprises a coupler.

10. A receiver as claimed in any preceding claim, wherein a downconverter unit is provided for down converting said received signals to an intermediate frequency range, said downconverter unit being arranged to receive a control signal from said identifying means for determining said intermediate frequency range, whereby said intermediate frequency range is determined by said identifying means based on the frequency of the strongest signal.

11. A receiver as claimed in claim 10, wherein a second downconverter unit is provided for downconverting the received signals to a predetermined second intermediate frequency range which is lower than said first intermediate frequency range, said identifying means being arranged to provide a control signal for controlling the second downconverter unit so that the output of said second downconverter unit falls within the predetermined range.

12. A receiver as claimed in claim 10 or 11, wherein at least one of said first and second downconverter units comprises an oscillator which is arranged to provide a downconversion signal and the frequency of said downconversion signal is controlled by said identifying means.

13. A receiver as claimed in any one of the preceding claims, wherein the identifying means comprises a first part for separating said signals and a second part for identifying the at least one strongest signal.

14. A receiver as claimed in claim 13, wherein said first part of said identifying means comprises a fast fourier transform unit for separating said signals.

5 15. A receiver as claimed in claim 13, wherein the first part of said identifying means comprises a digital downconverter for converting the signals to the baseband.

10 16. A receiver as claimed in claim 15, wherein the digital downconverter comprises an oscillator, the frequency of which is altered to provide each of said plurality of signals at the baseband.

15 17. A receiver as claimed in claim 15 or 16, wherein a plurality of downconverters are provided, each downconverter being arranged to convert signals within different frequency ranges to the baseband.

20 18. A base station incorporating a receiver as claimed in any one of the preceding claims.

25 19. A method for receiving a plurality of different signals at the same time, said method comprising:

identifying at least one strongest signal of said plurality of different signals; and

filtering said at least one strongest signal with respect to the other of said plurality of signals so as to attenuate said at least one strongest signal with respect to the other of said plurality of signals.